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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/048,233	01/28/2002	Toshiki Koshimae	Q67191	4362
7590	11/19/2004		EXAMINER	
Sughrue Mion Zinn Macpeak & Seas 2100 Pennsylvania Avenue NW Washington, DC 20037-3202				NGUYEN, DUNG T
				ART UNIT PAPER NUMBER
				2828

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/048,233	KOSHIMAE ET AL.
	Examiner Dung (Michael) T Nguyen	Art Unit 2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 August 2004.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-6 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3,5 and 6 is/are rejected.  
 7) Claim(s) 4 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in this instant application in view of Thronton et al. (US6574257).

With respect to claim 1, the prior art shows in Fig.11 a solid state laser diode comprising a laser diode 1 for exciting a solid laser medium and a constant current source 10 for supplying a constant current to the diode 1. The prior art does not disclose the voltage measurement unit for measuring a voltage at both ends of the

laser diode 1 and the abnormality detection unit for detecting an abnormality at the laser diode 1 based on an output of the voltage measurement unit. Thronton teach the voltage measurement unit for measuring a voltage at both ends of the laser diode 14 and the abnormality detection unit for detecting an abnormality at the laser diode 1 based on an output of the voltage measurement unit in Fig.1-2, element 38. For the benefit of controlling the stability performance of the laser diode, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the prior art the voltage measurement unit for measuring a voltage at both ends of the laser diode and the abnormality detection unit for detecting an abnormality at the laser diode based on an output of the voltage measurement unit as taught by Thronton.

With respect to claims 2-3, the prior art shows in Fig.9 a solid-state laser device comprising a plurality of laser diodes 1 connected in series for exciting a laser medium 2 and a constant current source 10. The prior art does not disclose the voltage measurement unit for measuring a voltage at both ends of the laser diodes 1 and the abnormality detection unit for detecting an abnormality at the laser diodes 1 based on an output of the voltage measurement unit. Thronton teach the voltage measurement unit for measuring a voltage at both ends of the laser

diode and the abnormality detection unit for detecting an abnormality at the laser diode based on an output of the voltage measurement unit in Fig.1-2, element 38. For the benefit of controlling the stability performance of the laser diodes connected in series, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the prior art the voltage measurement unit for measuring a voltage at both ends of the laser diode and the abnormality detection unit for detecting an abnormality at the laser diode based on an output of the voltage measurement unit as taught by Thronton.

With respect to claims 5-6, Thronton disclose in Fig.2 a detection circuit 38 comprising a comparator (col.5, 1.54-65) (the abnormality detection unit) which compares voltage detected from contacts 34, 36 to a reference voltage (a normal range having a finite width defined upper limit value and a lower limit value) and which outputs a signal (the abnormality detection signal) indicative of detected voltage which exceeds a reference voltage.

***Allowable Subject Matter***

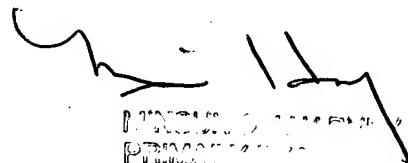
Claim 4 is objected to as being dependent upon a rejected base claim 2, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Communication Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.



Michael Dung Nguyen